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Case of Corneous Excrescence on the Leg. By C. H. HARRIS, M. D.

To the Editors of the Medical Examiner.

GENTLEMEN,—Believing that such growths of the cuticle as are here reported, are exceedingly rare, I have thought proper to transmit to you for publication in your very valuable journal, if you deem it worthy of a place, the history, as well as the treatment of this case.

Very truly yours,

C. H. HARRIS.

Buckingham county, (Va.) July 20, 1842.

In June, 1841, I was requested by a Mr. T. S. to visit a negro who, to use the gentleman's own language, had a horn growing from her leg. Upon reaching the house (in company with my brother, Dr. G. W. H.) the negro was shown us, and upon examination we found on the outer side of the right leg, just below the knee, a large projection, evidently an increased growth of the cuticle or epidermis, and resembling, more than any thing that I can compare it to, a ram's horn. It was two and a half or three inches in diameter at its base, and from six to eight inches in length, and was void of all sensibility. Upon my trimming it with my knife, she did not make the least complaint. Her general health appeared good. Upon inquiry, we ascertained that this girl (about twenty or twenty-one years of age) had had this limb, two or three years previously, very much burnt, and shortly afterwards this unnatural growth made its appearance.

Upon consultation, we at once came to the conclusion that this horn (if I may so term it) should be removed, and the system put under the influence of some remedy calculated to obviate this perverted growth. I suggested arsenic. The operation would have been performed at this time, but on account of the absence from home of the white family at the time of our visit, we concluded it would be best to defer it, as no inconvenience could arise from a short postponement. This negro resided in Goochland county, and being myself compelled to leave soon afterwards for Buckingham county, my place of residence, the case was left in the hands of my brother and his partner in the profession, Dr. J. W., and sometime during the next month (July) it was removed by these two gentlemen.

I have not seen the negro since the removal of this horn, but understand from her mistress that the place from which it was taken has not yet entirely healed; and at different times there has been an effort on the part of the disease to return; but before obtaining much growth, it fell off of its own accord. Her general health is still good.

After the operation, her system was put under the influence of no internal remedy, and I think it is to be regretted that this was not done; in fact, it would not now be too late to try what effect arsenic, or some other remedy, would exert upon this disease.

The specimen I now have in my possession.

[*Remarks.*—Perhaps the rarest circumstance connected with the foregoing case is the fact of the excessive cuticular or corneous growth being based upon the cicatrix of a burn; for such we understand to be the tenor of the letter. Cicatrices in general, and more especially those formed by burns, are usually deficient in the oily and corneous secretions of the skin, and a long time elapses before their superficies assume even the ordinary appearance of cuticle. They are liable, it is true, to a variety of tumours, many of which are extremely painful, and some of them prone to take on cancerous action. At the session of May 28th, M. Gimelle exhibited to the Academy of Medicine of Paris, a case of numerous rose-coloured, flattened, reticulated tumours, seated on the cicatrix of an incised wound, by a yataghan, in a soldier who had never laboured under syphilis. M. Velpeau was inclined to consider them as specimens of keloid, but the other academicians regarded them as simple vegetations. Much has been said of late on the cancer of cicatrices, but nearly all the masses of morbid growth, observed in such situations, have been examples of organised and vitalised tumour. When burns or mechanical abrasions are so superficial that the injury extends through the rete mucosum, but no deeper than the outer layer of the cutis vera, we have frequently observed very obstinate furfuraceous degenerations of the cuticle, which may be regarded as somewhat analogous to warts. But from whatever source the various diseases peculiar to cicatrices may have originated, and in whatever tissue they may be located, there is usually reason to presume that they are purely local in their origin, and due to the irregularity of the accidental structures in which they are seated. Those of a specific character may, indeed, be capable of propagating themselves, so as to affect the system and involve the necessity of general treatment; but there is little in the history of cutaneous diseases to induce a belief that such is the case with simple and apparently local cuticular degenerations. The scab in one form of rupia, which is sometimes compared to a horn, is not, in reality, a cuticular or corneous production, but a mere indurated morbid discharge. We may, therefore, be permitted to doubt whether the institution of any course of general alterative treatment in the case of Dr. Harris would have produced, or would now bring about a change of action in the part affected. Should the trial be made we shall feel much interest in the result.

But the extent and precise disposition of the corniferous layer of the integuments is still involved in some obscurity. That it extends to the bottom of the follicles, giving origin to the hairs and feathers of man and animals, is obvious; and these often penetrate—as extensions—far below what is ordinarily regarded as skin, into the subcutaneous cellular tissue, dipping into and forming connections with the fibres of the muscular panicle. Hence, the roots of a morbid corneous growth may lie much deeper than would be generally supposed by those who consider the cuticular formation as entirely superficial. In the common corns, the degeneration extends inwardly as

well as outwardly, so that the base is frequently found far below the ordinary level of the cutis vera; and, in the more irregular and obscure structure of the wart, we often find the corneous deposit apparently involving, but more probably merely displacing or causing the absorption of fascial and other tissues, until the tumour is found intimately connected with the periosteum, from which it might be erroneously supposed to take its rise. If, then, even in the ordinary condition of the parts, the corniferous tissue be capable of forming such deep connections, how much more singular may be the occasional effects of the disturbance of order, tissue and structure, observable in extensive cicatrices. These remarks are made, not as strictures upon the case to which they are appended, and to which they may not be directly applicable, but for the purpose of illustrating two practical surgical precepts which we consider highly important, and far too frequently neglected.

1st. In all operations by incision upon corneous malformations of a purely local character, it is necessary to carry the knife at least as deep as the superficial fascia of the part; and in very irregular structures of this character, such as the large bleeding warts, the incisions should reach the periosteum, unless tendinous thecæ or other intangible tissues intervene.

2d. In all operations by incision upon cicatrices, we should dissect to the full depth of the structure modified by suppuration; and whenever the step is admissible, we should include the whole cicatrix. The neglect of this precaution is a very frequent cause of mischief and want of success in operations upon even slight cases of deformity from burns.]

R. C.

BIBLIOGRAPHICAL NOTICE.

Etudes Statistiques sur les résultats des Grandes Opérations dans les Hôpitaux de Paris. De la Mortalité après les Amputations. Par Mr. MALGAIGNE, Chirurgien de l'hospice de Bicêtre.

Statistics of the results of the Capital Operations in the Hospitals of Paris. Of the Mortality after Amputations. By M. MALGAIGNE, Surgeon to Bicêtre.

[Archives Generales de Médecine, for April and May, 1842, pp. 389 and 50.]

Mr. MALGAIGNE is well known to the profession as the author of a successful treatise on Operative Surgery, as well as a statistical writer of great industry and correctness. His attention was first directed to the subject of the mortality after amputations during the Polish campaign of 1831, where

he acted as surgeon to the insurgent army. He commenced operations, he tells us, in the firm expectation of saving at least three out of four of his amputations; a hope, he states, founded on the alleged successes in the hospitals of Paris, during the revolution of July. He amputated immediately and united his stumps. When, on his arrival at Warsaw and Plock, his inquiry after his operations received the uniform answer of *death!* his disappointment was of course immense, and his chagrin proportionate. To console his wounded self-love, he set about, on his return, collecting the real results in the hospitals of Paris; and in publishing them he thinks he will render two important services to the young surgeon—1. That he will be less hasty in his prognosis. 2. That when, after necessary amputations, he shall have, as the rewards of all his care and solicitude, constant reverses, he will be saved the frightful nightmare which pursued our author, and the poignant doubts which he experienced.

From January 1, 1836, to January 1, 1841, 852 amputations were performed in the hospitals of Paris: of the hip-joint 1; of the thigh 201; of the knee-joint 3; of the leg 192; of the foot 38; of the metatarsal bones 8; of the toes 85; total 528, for the inferior extremity. Of the shoulder-joint 14; of the arm 91; of the forearm 28; of the wrist-joint 16; of the carpal bones 9; of the fingers 166; total 324, for the superior extremity. The mortality was 332, or nearly two in five; 255 for the inferior extremity, or about one-half; 77 for the superior extremity, or nearly one-fourth.

The single coxo-femoral disarticulation was secondary, for a gunshot wound, and on a male patient of 21 years, and was fatal.* In 201 amputations of the thigh in its continuity, including all causes, ages, and both sexes, there were 126 deaths, nearly 62 per cent., or about two-thirds. For wounds, burns, fractures, &c., there were 46; 44 men, and 2 women; of the men, 34 died and 10 recovered; of the women, both recovered. Total of deaths 34, or three-fourths. For chronic diseases there were 153 amputations, 92 deaths, 61 recoveries, or 3 deaths in 5. The number is completed by two amputations for double ankylosis, performed successively by M. Velpeau, on a man of 28 years, and with success.†

Amputation of the knee-joint.—This abandoned operation was revived in 1830 by Mr. Velpeau, who, with his peculiar industry, had collected 14 cases and 13 cures. These were isolated and collected from books, or other imperfect records; and that the conclusions he made were not warrantable,

* The first successful amputation of the hip-joint at Paris was performed in 1841, by Mr. SEDILLOT, at the military hospital of Val de Grace. In the report made to the French Academy of Medicine on the 3d January on this case, by Baron Larrey, it is recommended to tie the artery before commencing the operation, the utility of this practice having been proved in the course of the practice of the reporter.

† Recently Mr. JOBERT, of the Hôpital St. Louis, performed a double amputation of the thigh on a man of 28 years, for a scrofulous tumour of each knee-joint, with entire success.

was conclusively proved by the subsequent constant fatality of the operation, and which, since 1838, has been banished from the hospitals of Paris. Mr. Velpeau has operated 6 times ; 4 deaths. Mr. Laugier twice ; 2 deaths. Mr. Blandin once ; 1 death.

Amputations of the leg.—Of these there were 192, and 106 deaths, nearly 55 per cent., or one-ninth less than in amputations of the thigh. For organic diseases 112, 55 deaths, or one-half. For traumatic lesions 79, 50 deaths, or nearly two-thirds. One amputation of *complaisance*, performed at the Hôtel-Dieu, on a man of 19 years, for club-foot, and followed by death.

Partial amputations of the foot.—38 patients had their feet amputated, and 9 died, or 24 per cent. For organic lesions 29, and 3 deaths, or about one-tenth. For traumatic lesions 9, and 6 deaths, or just two-thirds.

Amputation of the shoulder-joint.—Surgeons have, in general, reported an incredible success in this operation. Mr. Gouraud, quoted by Mr. Velpeau in his *Médecine Opératoire*, says, “we have performed and seen performed this operation with such happy results, that we hardly believe it more dangerous than amputation in the continuity of the humerus, and even consider it doubtful whether, in gunshot wounds, it is not to be preferred.” M. Blancel mentions 60 successful cases in his thesis. Baron Larrey states that he was successful 90 times in 100 cases. Sabatier speaks in terms of enthusiasm of 14 successes in 17 cases obtained by this surgeon ; and Percy states that of 70 cases, one-sixteenth only terminated fatally. Let us see how far M. Malgaigne’s statistics confirm these statements. There were in the period of five years under consideration 14 scapulo-humeral disarticulations. In one patient there was at the same time amputation of the thigh, and, as a matter of course, he succumbed. Throwing aside this, there remain 13 cases and 10 deaths. 6 times the operation was performed for chronic diseases ; of these 4 were men from 15 to 41 years ; the young man of 15 recovered, all the others died. Women, respectively of 19 and 40 years of age, 2 ; both recovered. For traumatic lesions 7 operations, all males, from 27 to 65 years ; 7 deaths.

Amputation of the arm.—91 operations, 41 deaths, or 45 per cent., nearly one-fifth less than in amputation of the leg. Of these 91 amputations, there were for organic disease 61, and 24 deaths, or 2 in 5. The traumatic amputations were in number 30, and 17 deaths ; more than one-half.

Amputation of the fore-arm.—28 operations, 8 deaths ; 28 per cent. Of these, 17 were performed for organic disease, and 11 were traumatic ; of the former, 5 died ; of the latter, 3.

Amputation at the wrist.—The wrist was disarticulated 16 times ; 12 times for chronic affections, 4 times in consequence of injuries. Of these, 4 were women and 12 men. All recovered.

Amputation of the metatarsal bones.—8 amputations of a single metatar-

sal bone were performed; one only is designated as a disarticulation. 7 of these were upon males from 8 to 41 years of age; 1 on a female of 45 years. 6 were for organic lesions; 2 were traumatic. 1 death in the second series, where the head of the bone was removed, in a man of 41 years. 4 times the first metatarsal bone was the seat of the operation; twice the fifth; once the second; in the eighth the bone is not specified.

Amputation of the metacarpal bones.—9 operations, limited to one of the metacarpal bones. 1 only was traumatic, and was successful; 8 were for organic lesions; among these there was 1 death in a young man of 22 years. The third metacarpal bone was amputated 6 times, the fourth once, and the first twice.

Amputation of the great toe.—43 disarticulations, and 7 deaths, or 1 in 6, which is enormous. 29 were from organic disease, and 14 were traumatic. Of the first series 3 died, about one-tenth; of the last, 4 died, or more than one-fourth. Of this number 5 were females, all for organic disease, and all recovered.

Amputation of one of the toes.—26 operations, of which 12 were traumatic, and were followed by 1 death. Of these, there were 28 males and 5 females, from the ages of 5 to 62.

Amputation of several toes at the same time.—In 7 operations there was 1 death.

Amputation of one or more phalanges.—9 operations; 4 times on the phalanx of the great toe; twice upon the phalanges of the fourth and fifth; the three others not specified. No death.

Amputation of the Thumb.—9 operations and 3 deaths; 3 times for organic diseases, and for a supernumerary thumb; 5 times for traumatic lesions, and of these 3 died. Three deaths in five would seem to realize for the thumb Mr. Velpeau's assertion that "amputation of the fingers is not less dangerous to life than amputation of the arm."

Amputation of one of the fingers.—119 operations; 109 recoveries, 10 deaths, or one-twelfth. Organic, 79; deaths, 6, or one-thirteenth; traumatic, 40; 3 deaths. Total, 1 death in 10.

Amputation of several fingers at one time.—13 operations; one death, in a man of forty-two years, who had had four fingers amputated.

Amputation of the phalanges.—This operation was performed 24 times; there was one death in a man of thirty-two years, in whom the phalanx was crushed.

Having reviewed each variety of amputation, Mr. Malgaigne proposes to examine them together, in order to deduce some general conclusions. To do this effectively, he proposes to study successively—1. The influence of the determining cause, whether pathological or traumatic. 2. The influence of sex. 3. That of age. 4. That of the season of the year; and 5. The influence of the hospitals themselves in the mortality.

In answer to the first question, *whether pathological or traumatic amputations are the most fatal*, Mr. Malgaigne's tables decide certainly in favour of the traumatic. The great pathological amputations gave 48 per cent., whilst the traumatic gave 64 per cent.; for the lesser pathological amputations the mortality was $7\frac{1}{2}$ per cent.; for the traumatic it exceeded 15 per cent. In considering the traumatic operations as primary or secondary, the data are small, there being only 26 amputations of the thigh, and 43 of the leg. Of the 26 of the thigh, 16 were primary and 10 secondary; the first series gave 12 deaths, and the second only 6. Four of the immediate amputations were performed, however, on subjects under 20 years of age, a period at which, according to Mr. M., the mortality is greatest. All four died. The number is thus reduced to 12, and 8 deaths.

In 43 cases of amputation of the leg 33 were primary, with 22 deaths; and 10 were secondary, with 7 deaths. Under 20 years, 5 primary amputations gave 4 deaths; 2 secondary, 1 death. Above 20 years, there remain 28 primary amputations with 18 deaths; whilst the secondary amputations numbered 6 deaths for 8 operations. Total,

49 primary amputations,	34 deaths.
20 secondary " "	13 " "

From our author's tables, it will be found that females resist much better than males the fatal effects of amputation. Out of 98 great pathological amputations, there were only 44 deaths; out of 40 lesser ones, 2 deaths. Of 17 great traumatic amputations there were 10 deaths; lesser amputations, 8 deaths.

In regard to the influence which age exercises, we are at the outset struck at the great mortality which prevails between the second and fifth year, in comparison with that between the 5th and 15th year. This, M. Malgaigne thinks, is not confined to amputations, but extends to all operations. In Lithotomy he found the mortality just one-half. The data, we think, are altogether insufficient to warrant any conclusion.

In all capital operations, the season of the year has always been considered as exerting a marked influence; and the spring and autumn were generally viewed as the most favourable periods. It appears, from the tables before us, that the greatest number of amputations are performed in the months of May, June, July, August, and September, and, moreover, that the mortality is greater in the preferred months. For the four winter months we have 81 operations and 41 deaths, and in the months of March, May, June and August, 141 operations, and 81 deaths. In repeating the calculation for each sex, from 20 to 35 years, Mr. M. finds the mortality decidedly less in winter than at any other season; but, on the contrary, from 15 to 20, summer has incontestably the advantage. With regard to traumatic amputations the mortality is about the same for the four seasons.

With respect to the comparative mortality after amputations, in the various hospitals of Paris, our author has examined the results in nine hospi-

tals—l'Hôtel-Dieu, la Pitié, la Charité, St. Louis, Beaujon, Necker, St. Antoine, Cochin, and l'hôpital des Cliniques. The Hôtel-Dieu has enjoyed, for many years, the reputation of being the most unlucky of all the Parisian hospitals. For a century past it has been stated that the operation of trephining has never succeeded there, but the trephine rarely, if ever, succeeds anywhere. Within five years this operation has been performed 15 times in the hospitals of Paris, and was in every case fatal. According to Mr. Malgaigne, so far as the great amputations are concerned, the Hôtel Dieu ranks sixth in the rate of mortality, and la Charité second for the great pathological amputations, and third for the great traumatic. For the rest, the extremes only are stated in a general manner. For the pathological amputations, the most favoured hospital lost but 1 in 5, and the least fortunate lost 9 in 10; the difference being from 20 to 9 per cent. For the traumatic amputations, the most favoured had in 10 amputations 3 deaths, and the least, 5 amputations and 5 deaths; the difference being from 31 to 100 per cent. Mr. Malgaigne, in studying this part of his subject, compared first the general mortality in the same hospital, in the same series of years, with the mortality of the great amputations, but was unable to establish any ratio. He then compared the general mortality in the surgical service with that after the great amputations, but the difference in the diseases admitted into each establishment is such, that no satisfactory estimate can be made; for example, the Hôtel-Dieu is one of the hospitals in which the least deaths occur in the surgical service, whilst the hospital the most fortunate, as regards amputations, is one where the surgical mortality is the greatest.

Is the cause to be found in the amount of individual expenditure? It appears that in a period of 10 years, the most unlucky hospital was the one which expended most, and the most fortunate was the one which was the least prodigal.

Topographical position would seem to give as little aid in the solution of this problem, for the most favoured hospital, as well as the least so, are both situated on an elevation near one of the gates of the town.

An inquiry into the degree of ventilation of the different wards was not attended with more happy results. Thus frustrated in his scientific data, Mr. Malgaigne was anxious to see how far the vulgar proverb, *vieux médecin, jeune chirurgien*, was applicable. He found that the most brilliant successes, as well as the saddest reverses, attended the young surgeon, whilst the success of their seniors observed a mean. Nor does it appear that the surgeon, in changing his hospital, carries his luck, whether good or bad, with him, but bequeathes it to his successor. What, then, demands Mr. Malgaigne, is this mysterious fatality which hangs over our hospitals in general, and especial ones in particular? He imagines that, by his meditations and researches, he is able to offer a solution to the question, or, at least, to indicate some of the prominent causes.

Mr M. thinks that the lesser mortality in private practice can be accounted

for better by the greater care they receive, than by the greater amount of purer air that circulates in a crowded hospital ward. Human attention, as well as reason and intelligence, has its limit, and when applied to 20 patients, each one must receive a greater share than if scattered among 40. Thus, patients in private practice are better studied than those in hospitals; and a small surgical service is, as a general rule, better visited than a large one. This view is strengthened by a reference to the mortality in the Hôpital du Midi, in which the first diminution coincided with an augmentation of the number of physicians; and the second with the distribution of the sexes in different hospitals; and receives additional confirmation from the other hospitals of Paris, particularly the Hôtel-Dieu. When Dupuytren alone had charge of the whole surgical service, the mortality was:

In 1818,	1 in 10.
In 1820,	1 in 13.
In 1821,	1 in 15.
In 1822,	1 in 11.
In 1828,	1 in 16.

Compare these results with those since the division of the service:

In 1837,	1 in 18.
In 1838,	1 in 19.
In 1839,	1 in 19.
In 1840,	1 in 17.

Although this might be thought to furnish sufficient indirect proof against too large wards, yet more precise data can be further alleged. At the period of the invasion, the hospitals being insufficient to accommodate all the wounded soldiers, the Prefect of the Seine placed at the disposition of the Conseil des Hôpitaux, the *abattoirs* of Roule, Montmartre, and Ménilmontant. These public slaughter houses are composed of distinct pavillions, separated by large streets, and are of one story. A comparison of the mortality in these and in the hospitals, results considerably in favour of the *abattoirs*.

The diet of the patients also exercises, Mr. Malgaigne thinks, a decided influence. During the period above mentioned, the French and German soldiers had the same regimen, whilst the Russians were rarely placed on a soup diet, and hardly ever on *diète absolue*. In consequence, those who were slightly wounded received a full portion, and the others a half portion.*

* In the 4th vol. of Guy's Hospital Reports, Sir Bransby Cooper, in an article on amputation, states that he has been credibly informed that not more than three or four patients out of one hundred, who undergo this operation in the Parisian Hospitals, are saved; and he adds his conviction that this extraordinary mortality is in a great measure dependent upon the meagre diet of the patients, and to the use of

The proportion of deaths is thus stated :

French soldiers,	1 in 7.
Prussian “	1 in 9.
Austrian “	1 in 11.
Russian “	1 in 26.

Another circumstance would seem also to have diminished the mortality among the Russians—the use of the vapour baths. To judge from the following statement, their influence was very great. In two hospitals without baths, the mortality was 1 in 10, and 1 in 11 ; in the two with baths, 1 in 18, and 1 in 77.

Mr. Malgaigne concludes thus : “ The impression which this examination has made upon me has been a sorrowful one. The successes of modern surgery, estimated by this terrible scale of mortality, appear far less brilliant ; and yet I have rather softened the results. Thus I have counted as cured, all amputations which did not die ; and it was necessary that these supposed cures should all be counted as triumphs of our art. More than one amputation was but imperfectly cicatrised ; more than one patient left the hospital prematurely, to return afterwards and undergo new operations, and often to die. I could not omit this last character of so sad a picture ; it was necessary that I should unveil this deep and unsuspected wound of our surgery ; now the masters are warned, averted, and put on their guard : *Cureant consules ne quid respublica detrimenti capiat.*”

Our intention was to have compared the above results with those obtained in this country and England, but our limits oblige us to postpone this to a succeeding number.

M. CLYMER.

ANALECTA.

On the Treatment of Fracture of the Neck of the Thigh-Bone, within the Capsular Ligament. BY A MEDICAL OFFICER OF THE ARMY.—I believe it will be generally admitted that no subject of surgical treatment has been more unsuccessful in its results than in cases of fracture of the neck of the femur ; and it has appeared to me, that the explanations or apologies for our failures in such cases has been any thing but satisfactory, or even in accordance with what is known and regu-

the *vin ordinaire*, as the only stimulus employed ; a beverage, he adds, totally insufficient for the purpose. How correct the first part of the statement is, the present article enables our readers to judge. In regard to the second question we may state, after a constant attendance for a long period in the hospitals of Paris, that the diet allowed is of an excellent and nutritious quality, and sufficient in quantity ; and, moreover, that in all cases where the surgeon deems the exhibition of stimulants demanded, they are freely given.

larly inculcated, of the effect of pressure on the most solid parts of the animal frame. At present I merely allude to those cases of failure which have been imputed to the circumstance of the fracture having been within the capsular ligament, and that there, that membrane intervening between the fractured portion of the bone, prevents the ossification of the fractured parts. I shall not notice what is generally known and assented to, that pressure against such an intermediate substance would most certainly, in a person of a sound constitution, occasion in time the absorption of the intervening obstacle to the re-union of the bone; but I will venture to affirm, that even cases of fracture of the neck of the femur within the capsular ligament, although the person injured would become immediately lame, still the distortion of the limb, at the seat of the injury, would not be easily ascertained even by the most practised and discerning examination, unless the fracture had been occasioned by extraordinary external violence.

In cases of the description which I now speak of, practitioners seem to me to have lost sight, and never considered the import and utility, of the *ligamentum rotundum* which binds the head of the femur to the acetabulum. Without this wonderful piece of mechanism, a person moving in the horizontal position, or even in walking upon an uneven surface, would be in continual danger of dislocating the femur. In this view of the matter, I therefore maintain, that, as the humble servants of nature, we should endeavor to follow her dictates in presuming to rectify any irregularity that happens in the wise and beneficent purposes of Providence. It is probably, in a great measure, owing to the rupture of the round ligament in cases of dislocation of the thigh, that a certain lameness always inconveniences the sufferer after it has been reduced, attended with a considerable swelling or fulness of the muscles adjoining the trochanter, particularly on every attempt to move the limb. If the opinion thus surmised be correct, it will be easily understood that, on a fracture of the neck of the femur taking place, the body of the bone being thereby disconnected with the acetabulum, it will, by its weight, naturally recede from the broken portion within the acetabulum, even by the best contrived bandaging for securing the apposition of the fractured parts, unless some means are had recourse to in order to support and maintain the trochanter in its healthy position: it is from neglect to this part of the treatment, as commonly practised, that I am inclined to suppose that in a great degree our failure in obtaining a cure in such cases of fracture is to be imputed; for I think that in a just apposition of the fractured ends of the bone no intervening substance could possibly prevent an ultimate re-union of the parts. I shall now, in a summary way, state a case or two in proof of the propriety of the practice I have hinted at: the parties being my friends, although not under my care, every circumstance of their cases was very well known to me.

The first is the wife of a physician, a lady past the meridian of life, weakly, of a spare habit: had her right thigh-bone broken at the neck by something taking her foot as she walked through the drawing-room: when laid upon the sofa, her husband could not perceive any particular injury where she complained of pain; and in this state she was carried to bed: she passed the night in much pain in the part; and it was not till from twenty to thirty hours elapsed that the nature of the accident was ascertained. The fracture was reduced when she had been laid on a firm mattress; a firm bandage was tightly bound round the pelvis, and the limb being stretched in a straight line was bound in such a manner as to prevent all motion in it. She luckily escaped any feverish symptom; but in the course of a few weeks her hus-

band got a cushion made to slip under the back, in order to relieve the intolerable pain and uneasiness she experienced from laying so long in the recumbent posture upon an unyielding surface: this cushion also gave support to the trochanter, and happily, at the end of four months, on the bandages being taken off, a perfect re-union of the bone was found to have taken place. This lady is now perfectly well, and the lameness but very little to be noticed.

The next case I shall mention is the wife of a colonel in our army. She is about the same age as the above, of a full habit, subject to inflammatory affections of the chest, and has suffered from gout: the neck of the thigh-bone was fractured, by her being blown over in a high wind when walking on an uneven surface. Her accident happened a month or two previously to that of the case above mentioned: they were attended by the same practitioner, and the same mode of treatment adopted—the bandaging of the outstretched limb, &c. &c. This lady had occasion to be bled and leeches during the first months of her confinement; but unluckily, on the bandages being removed at the end of four months, it was found that the bone had not only not united, but that the fracture was in every way as upon the occurrence of the accident. Upon this occasion her husband was earnestly recommended to have a similar cushion used as in the former case, upon the fracture being reduced; and to the satisfaction of all her friends it was found, on removing the bandages, after laying four months more in the recumbent posture, that the bone was perfectly united: perhaps an unique case in the annals of surgery, that a bone should unite after several months' separation. I have seen this lady repeatedly since her cure: the motion of the hip-joint is perfect; but although the knee-joint is not affected, in consequence of the straight position in which the limb was placed, and the bandaging, the muscles have thereby lost their natural action; and from this cause she cannot bend her leg. The heel is also drawn up, owing, as I suppose, to so long confinement in one posture, and the consequent contraction, and perhaps the conglutination, of the fibres of the flexor muscles. In other respects she enjoys her usual health.

I shall next mention the case of a lady about forty years of age, the wife of a surgeon to an hospital. The accident occurred when playing at shuttlecock with her children in the drawing-room. In this case, also, the nature of the injury was not immediately discovered. When I saw her, a few days after, she was lying in a soft bed, with a bandage round the pelvis; the limb laid straight, but not bandaged.

In this case, I have no doubt, the trochanter was supported and maintained in its natural position by the pressure of the mattresses of the bed, which were not firm, as in the former cases, but soft and yielding: this lady very soon recovered the use of her limb, without any remarkable lameness. I could, to the above, add other cases, where, I believe, a fracture of the neck of the thigh-bone had taken place within the capsular ligament, and the protuberance of the fractured bone not being discernible on the first examination, the disease has been treated as a severe bruise, and which terminated in permanent misery and lameness; or if the true nature of the injury has at length been discovered, the failure of the cure has been imputed to the intervention of the capsular ligament between the ends of the broken bone. The inference I draw from the foregoing statement is, in the first place, that every means should be adopted for securing the apposition of the fractured ends of the bone, and that this view is mainly to be effected by supporting the great

body of the femur, which otherwise, from its weight, must recede from and sink under the surface of the broken portion, remaining fixed in the acetabulum; an inspection of the skeleton must satisfy the most superficial that such will be the consequence when the person, having the neck of the femur broken, is laid upon his back. I do not see the necessity of placing the patient, in this state, upon a hard, unyielding mattress. I know it often occasions intolerable distress to the patient, and may therefore protract, if not interrupt, the cure: a mattress in ordinary use will obviate many of these inconveniences. The fracture being reduced, the limb should be laid in a bent position, as in other fractures of the femur, so that all the muscles may be in a state of complete relaxation; and after the bandage is firmly secured round the pelvis, a long cushion of horse-hair, about six or eight inches in breadth, according to the bulk of the patient, and about the same thickness, and so long as to reach from the under and upper part of the os ilium, and going under the trochanter to a few inches below it. This cushion should be secured with tapes at each end to fix round the body and the thigh, and should be carefully examined every day to see that it does not shift its place: or to avoid the chance of this happening, the bandage around the pelvis might be so constructed as to give the necessary support to the thigh. In this way the cure of such cases will be more certain, and require less time than the practice now in general use.—*London Med. Gaz.*, May 20, 1842.

[*Remarks.*—The foregoing paper may prove useful by impressing the importance of a measure which, though by no means novel, has been but seldom practised. We allude to the provision of proper support to the femur in fractures of the neck. It is now no longer doubtful that osseous or very firm chondroid union has occasionally occurred in fractures within the capsular ligament, and the possibility of such a result should render us extremely careful to favour accuracy of coaptation by all possible means. We believe that on a well adjusted bed, with the limb in the straight position, the weight of the bone can have little influence in carrying it away from the superior fragment, that weight being far more than compensated by the tonicity of the greater psoas and the iliacus muscles: but the action of these muscles may prove insufficient to counteract that of the three glutii, and especially the great gluteus, which tend to draw the trochanter major, and, with it, the shaft of the femur, backwards. It is, therefore, desirable, in fractures of the neck of the thigh bone, that the upper part of the thigh should be properly supported by means of a broad compress duly graduated—a measure that need not interfere in any degree with the permanence of the necessary extension and counter-extension, unless the limb itself be incumbered with useless bandages, as is usually directed in most of the systematic treatises.

To the flexed position, as recommended by the writer of the article under notice, there exists a most serious objection. By the relaxation of the psoas and iliacus, and the partial extension of the glutii muscles, we at once diminish very seriously the only natural force which tends to prevent the retreat of the superior extremity of the inferior fragment, while we materially in-

crease the already too powerful muscular action tending to produce this deformity. To this difficulty is superadded the awkwardness, if not impossibility of efficiently counteracting the disposition to a retrocession by means of a compress. The horse hair pad, recommended in the paper, is infinitely less certain in its action than is a properly graduated compress based upon an ordinary mattress, and acting upon the thigh alone in the extended position.

The employment of a band around the pelvis and trochanter major appears to us totally unnecessary when the limb is treated in the extended position; for, there exists no force tending to separate the fragments by carrying the base of the neck *outwards* from the superior fragment, and the tonicity of the adductors of the thigh, including the glutii, is quite sufficient, unless in cases of paralysis, to preserve the coaptation of the fragments when permanently extended to the proper degree, duly supported, and prevented from forming an angular deformity by placing the foot in a proper position. The band recommended is liable to the objection of concealing the condition of the parts, and proving uselessly annoying to the patient; for, when the extended position is selected, it answers no legitimate indication in the case.

Though the flexed position is never likely to find many advocates in America, the practice of Pott being here generally discarded, it may be well to remark that, as the head of the bone in these cases does not necessarily follow the rotation of the base of the neck in the movement of flexing the thigh upon the pelvis, there is always danger that, in case of union being effected in that position, *the power of extending the thigh* after the cure may be permanently limited. To this we may add that the due extension and counter-extension of the limb—which constitute by far the most important means of coaptation, though they are scarcely touched upon by the writer under review—cannot be effected with any precision in the flexed or double flexed position.

In one of the cases mentioned by the writer, a persistent immobility of the knee joint is attributed to the straight position, and the bandages applied to the limb. We believe that no excusable reason can be given for the application of any bandages directly to the limb in any uncomplicated fractures of the thigh, except in those which, being oblique from before backwards, are seated within two or three inches above the origin of the gastrocnemii muscles. As for the stiffness resulting from the long continued rest of the knee and ankle joints, it is nearly as likely to occur in the one attitude—properly preserved—as in the other; its nature, temporary character and cure, whenever it happens to occur, are perfectly understood; and the experience of France and the United States, as well as that of some modern English surgeons, proves that it is not a valid objection to the straight position. It is, indeed, somewhat curious that ancient custom should so far influence the judgment of a writer who reports two beautifully successful cures of an accident once universally, and still generally deemed irremediable;

that he should advocate double flexion of the limb, when, in both his cases, *the complete extension of the leg and thigh was the method actually practised*. We feel perfectly assured, upon broad mechanical principles, that if the directions given at the conclusion of the paper had been followed, the coaptation would have been much less perfect, and the results consequently less happy.

That the supply of blood to the superior fragment in fractures within the capsule is extremely limited, is sufficiently proved by the atrophy of the round ligament and the fragment itself, the absorption of the stump of the neck attached to the head of the femur, the deficiency or sparcity of ossific deposit thereon, and other well known phenomena, usually observed *post mortem* in old cases of this character. The cure, then, must mainly depend upon the rapidity with which the circulation in the superior fragment can be restored; and the only source from which new vascular connections to a sufficient extent can be rapidly derived, is from the capillaries of the cancellated structure of the base of the neck. From these must the mass of the first bond of union be supplied and organised; for, the doctrine of certain hypertheorists who neglect the study of the vicarious actions of our various organs—a doctrine which teaches that most of these vessels are incapable of secreting bone, because, in health, they are mainly engaged in the secretion of the medulla—will be immediately repudiated by any uncommitted examiner who studies the early history of reunion in fractures. In order that proper anastomoses may be established by the almost unaided energies of one fragment, it becomes all important that the coaptation should be rendered as accurate and permanent as possible. Disturbing causes, of very little importance in most fractures, may, therefore, prove fatal to success in those occurring within the capsule; and the paper under notice is rendered highly valuable, by calling attention to one very important indication in effecting coaptation; but we cannot agree with the writer in thinking that the intervention of the capsular ligament between the fragments is so light an evil as he represents it. The intervention of any substance other than free cellular tissue, between the fragments in an ordinary fracture, always greatly enhances the labour of cure; and when *ligamentous matter* is so placed, the danger of pseudarthrosis is imminent. In fractures within the capsule, we must regard such an occurrence, in addition to the other extreme difficulties of the case, as necessarily precluding all reasonable hope of firm union in fractures within the capsule: fortunately, the chances of such a disaster are few—much fewer, we think, than some authors suppose; and when due allowance is made for the former neglect of accurate coaptation, the still existing prejudices of certain schools, in relation to the attitude of the limb, and the general impression of the hopelessness of these accidents, which often leads to carelessness in the treatment, we cannot avoid the hope and confident anticipation that the cure, without lameness, of fractures of the neck of the femur within the capsule, will soon cease to be regarded as an astonishing result.]

R. C.

Case of artificial premature Labor. By SAMUEL S. BRAME, of Lowestoft.—Elizabeth Bristow, aged 28, has been married seven years, and pregnant six times. Having a slightly contracted pelvis, and generally very large children, she has never been able to give birth to a fœtus at the full period of utero-gestation, without submitting to the operation of embryotomy. Her first confinement took place in September, 1836, when she was delivered of a living child in the eighth month, no artificial means being used to bring on labour.

In the month of December, 1837, having gone her full time the operation of embryotomy was performed for the first time.

In October, 1838, I first attended her, when she gave birth to a seven months' child. On the 4th of September, 1839, embryotomy was the second time performed upon a nine months' fœtus. At that time I desired her, should she ever become pregnant again, to inform me of the fact at the end of the seventh month. In her fifth pregnancy she miscarried towards the conclusion of the sixth month, in November, 1840.

Not having forgotten my request made to her at the last operation, her mother called upon me, a short time since, to say that her daughter was again pregnant, and in her seventh month. Being childless, and naturally dreading to undergo an operation so distressing to the feelings of a mother, she earnestly requested me, if it were possible, to relieve her at once. I waited until I considered she was somewhat advanced in her eighth month; and on Saturday, April 2, at 12 o'clock at noon, after administering a dose of castor oil, and subsequently an enema, I punctured the membranes, by introducing a pointed quill through the os uteri, using the index finger of the right hand as a director.

Half an hour after this operation about two pints of liquor amnii escaped, the patient experiencing at the same time slight pain in the abdomen. Irregular pains, preceded by shiverings, supervened; on the following day, at noon, the os uteri was fully dilated. At six o'clock on the same day I administered a dose of the ergot of rye, which was repeated at seven o'clock, and at eight my patient was delivered of a living child, thirty-two hours after puncturing the membranes.

Both mother and child are doing well.—*Prov. Med. Journ.* April 23, 1842.

Spinal Distortions. Division of the Muscles of the Back.—In an article in the "Gazette Médicale," M. Guerin endeavours to refute the objections raised by M. Bouvier against his theory of the dependancy of spinal distortions on muscular contraction, and the applicability of tenotomy to their cure. For the present we will simply notice M. Guerin's theory, reserving to some future number a summary of the different theories on this class of affections. According to M. Guerin spinal distortions should be classed with club-foot, wry-neck, &c., and that as the muscles of the foot, leg, knee, &c., by their contractions produce certain deformities, which, arising from the same cause, perverted muscular action, present the same general character, and require for their relief the same operation, division of the contracted muscles; so also curvature of the spine may be considered as the club-foot of the back, depending on the contracted state of the muscles of this region, and requiring for its cure their division.—*London Lancet.* May 14, 1842.